



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P O Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

44231 7590 05/15/2008

KILPATRICK STOCKTON LLP - 46872
J. STEVEN GARDNER
1001 WEST FOURTH STREET
WINSTON-SALEM, NC 27101

EXAMINER

GATES, ERIC ANDREW

ART UNIT

PAPER NUMBER

3726

DATE MAILED: 05/15/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,641	04/15/2004	Kevin Scott Smith	UNCC 02-020	9020

TITLE OF INVENTION: DAMPING PRODUCTS AND PROCESSES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$720	\$300	\$0	\$1020	08/15/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

44231 7590 05/15/2008

KILPATRICK STOCKTON LLP - 46872
J. STEVEN GARDNER
1001 WEST FOURTH STREET
WINSTON-SALEM, NC 27101

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,641	04/15/2004	Kevin Scott Smith	UNCC 02-020	9020

TITLE OF INVENTION: DAMPING PRODUCTS AND PROCESSES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$720	\$300	\$0	\$1020	08/15/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
GATES, ERIC ANDREW	3726	409-141000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____
Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,641	04/15/2004	Kevin Scott Smith	UNCC 02-020	9020
44231	7590	05/15/2008	EXAMINER	
GATES, ERIC ANDREW				
KILPATRICK STOCKTON LLP - 46872 J. STEVEN GARDNER 1001 WEST FOURTH STREET WINSTON-SALEM, NC 27101			ART UNIT	PAPER NUMBER
			3726	
DATE MAILED: 05/15/2008				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 45 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 45 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.

10/825,641

Examiner

Eric A. Gates

Applicant(s)

SMITH ET AL.

Art Unit

3726

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's amendment filed 5 March 2008.
2. ☒ The allowed claim(s) is/are 1,9-11,17,21,22,24,25 and 28-34.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. N. Dean Powell on 9 May 2008.

The application has been amended as follows:

Claim 1. (Currently Amended) A machine tool damping apparatus comprising: a first element adapted to be coupled with a second element, the first element comprising a structured surface and the second element comprising a collet having a second surface, wherein the second surface comprises a receiving surface that is substantially uniform and wherein the structured surface comprises a plurality of depressions wherein the depressions are formed by machining and wherein the depressions are substantially hemispherical, wherein the structured surface directly contacts the receiving surface.

Claim 4. (Canceled).

Claim 11. (Currently Amended) A machine tool apparatus comprising: a first element adapted to be coupled with a second element, the first element comprising a first

Art Unit: 3726

surface and the second element comprising a collet; and means for damping, the damping means disposed on the first surface of the first element wherein the second element comprises a receiving surface for the collet, wherein the first surface is adapted to be coupled with the receiving surface and wherein the first surface directly contacts the receiving surface and wherein the damping means comprises a plurality of depressions disposed in the first surface and wherein the depressions are formed by machining, wherein the depressions are substantially hemispherical.

Claim 14. (Canceled).

Claim 16. (Canceled)

Claim 17. (Currently Amended) A method of damping vibrations in a machine tool apparatus comprising a first element and a second element, wherein said method comprises: adapting a first element to be coupled with a second element, the first element comprising a structured surface and the second element comprising a collet having a second surface, the second surface comprising a receiving surface and the structured surface comprising a plurality of depressions and wherein the depressions are formed by machining and wherein the structured surface directly contacts the receiving surface, wherein the depressions are substantially hemispherical.

Claim 18. (Canceled)

Claim 19. (Canceled)

Claim 20. (Canceled)

Claim 23. (Canceled)

Claim 26. (Canceled)

Claim 27. (Canceled)

Claim 29. (Currently Amended) The apparatus of claim 11 ~~26~~, wherein a viscous fluid is not disposed on the structured surface.

Claim 30. (Currently Amended) A machine tool apparatus comprising: a first element comprising a first end, a second end, and a first surface, wherein the first surface, having a conical shape, is disposed proximate to the first end, and wherein the first surface comprises a structured surface, the structured surface comprising a plurality of substantially hemispherical depressions, and wherein the second end is adapted to contact a machine tool; a second element comprising a distal end and a proximate end, wherein the proximate end comprises a conical receptacle, the conical receptacle being defined by a second surface and a receiving end; wherein the first element is coupled

with the second element such that the first end contacts the receiving end of the second element such that the first surface contacts the second surface; wherein the first surface comprises a corresponding size, shape, and geometry as the second surface such that a substantially secure connection is created when the first element is coupled with the second element; wherein the structured surface directly contacts the second surface; and wherein the plurality of depressions provides a means for damping.

Claim 31. (New) The apparatus of claim 11, wherein the structured surface further comprises a projection.

Claim 32. (New) The apparatus of claim 30, wherein the structured surface further comprises a projection.

Claim 33. (New) The apparatus of claim 11, wherein the depressions are arranged in a non-uniform pattern.

Claim 34. (New) The apparatus of claim 30, wherein the depressions are arranged in a non-uniform pattern.

Allowable Subject Matter

2. Claims 1, 9-11, 17, 21, 22, 24, 25, and 28-34 are allowed. Claims 1, 11, 17, and 30 are the independent claims.

3. The following is an examiner's statement of reasons for allowance:

The closest prior art of record is U.S. Patent 4,825,983 to Nakanishi and U.S. Patent Publication 2004/0113133 A1 to Geissele et al., which were applied to the claims in the office action mailed 5 December 2007, and U.S. Patent 6,280,126 to Slocum et al., which was applied to the claims in the office action mailed 31 August 2007. Suffice it to say, the patent to Nakanishi does not disclose "A machine tool damping apparatus" or "the second element comprising a collet having a second surface" or "wherein the structured surface directly contacts the receiving surface" as claimed in independent claim 1, or "A machine tool apparatus" or "the second element comprising a collet" as claimed in independent claim 11, or "A method of damping vibrations in a machine tool apparatus" or "the second element comprising a collet" as claimed in independent claim 17, or "A machine tool apparatus" or "wherein the structured surface directly contacts the second surface" as claimed in independent claim 30, and as such does not anticipate the instant invention as disclosed in independent claims 1, 11, 17, and 30.

The patent publication to Geissele et al. does not disclose "A machine tool damping apparatus" or "the second element comprising a collet having a second surface" as claimed in independent claim 1, or "A machine tool apparatus" or "the second element comprising a collet" as claimed in independent claim 11, or "A method of damping vibrations in a machine tool apparatus" or "the second element comprising a collet" as claimed in independent claim 17, or "A machine tool apparatus" or "the first surface, having a conical shape" or "wherein the proximate end comprises a conical

receptacle" as claimed in independent claim 30, and as such does not anticipate the instant invention as disclosed in independent claims 1, 11, 17, and 30.

The patent to Slocum et al. does not disclose "wherein the depressions are substantially hemispherical" as claimed in independent claim 1, 11, 17, and 30, and as such does not anticipate the instant invention as disclosed in independent claims 1, 11, 17, and 30.

Furthermore, there is no combinable teaching in the prior art of record that would reasonably motivate one having ordinary skill in the art to so modify the teachings of Nakanishi, Geissele et al., and Slocum et al. without the use of hindsight reasoning, and thus, for at least the foregoing reasoning, the prior art of record does not render obvious the present invention as set forth in independent claims 1, 11, 17, and 30.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric A. Gates whose telephone number is (571)272-5498. The examiner can normally be reached on Mon-Thurs 8:45 - 6:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3726

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. A. G./
Examiner, Art Unit 3726
9 May 2008

/David P. Bryant/
Supervisory Patent Examiner, Art Unit 3726